

10/774866

T S5/3,KWIC/1-14

BEST AVAILABLE COPY

5/3,KWIC/1 (Item 1 from file: 95)

DIALOG(R)File 95:TEME-Technology &amp; Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

A 01924305 20041201499

**Formulating fluids with improved friction durability for we**  
(Schmierstoffe mit erhoehter Reibungsfestigkeit fuer Anfahr-  
Watts, Raymond; Castle, Rebecca; Gorda, Keith; Nibert, Roger  
Infineum, Linden, US

Getriebe in Fahrzeugen 2004, VDI-Ges. Entwicklung Konstrukti  
Friedrichshafen, DE, 22.-23. Jun, 2004VDI-Berichte, v1827, n  
2004

Document type: Book chapter; 06 Conference paper Language:

Record type: Abstract

ISBN: 3-18-091827-6

ISSN: 0083-5560

2004

## ABSTRACT:

...speeds. In response to the need for a test to assess fric  
requirements of torque converters with regulated clutches  
authors have developed a test method using a modified SAE2 m  
cycle was developed in which the clutch is slipped under  
conditions for 50 minutes. A program was begun to develop a

...DESCRIPTORS: DURABLENESS; MECHANICAL TORQUE CONVERTERS;  
; GEAR LUBOIL; ESTATE CARS; FRICTION CLUTCHES; FRICTION; FRI  
; LUBRICANTS

A+ 5/3,KWIC/2 (Item 2 from file: 95)

DIALOG(R)File 95:TEME-Technology &amp; Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

01859710 20040401841

**INFLUENCE OF ATF friction properties on shudder in slipping t**  
**clutches**

(Einfluss der Reibungseigenschaften des Fluids von Automatik  
des Zittern in Schlupf-Drehmomentwandlerkupplungen)

Cameron, T; Tersigni, S; McCombs, T; Jao, TC

Virginia Commonwealth Univ., Richmond, USA; Ethyl Petroleum

<http://www.dialogclassic.com/main.vmgw>

10/22/2006

Richmond, USA

Tribology and Lubrication Engineering, 14. Internat. Colloqu  
Vol. 1, Ostfildern, DE, Jan 13-15, 20042004

Document type: Conference paper Language: English

Record type: Abstract

ISBN: 3-924813-54-X

**Effects of ATF friction properties on snagger in slipping  
converter clutches**

2004

ABSTRACT:

Slip-controlled torque converter clutches (TCC) were int  
automatic transmissions in the 1980's to improve fuel econom

5/3,KWIC/3 (Item 3 from file: 95)

DIALOG(R)File 95:TEMP Technology, & Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

01859709 20040401842

A\* **Impact of lubricant formulation on the friction properties  
clutch plates**

(Einfluss der Schmierstoffformulierung auf die Reibungseigens  
Carbonfaser-Kupplungsdruckplatten)

Castle, RC; Watts, RF

Infineum USA, Linden, USA

Tribology and Lubrication Engineering, 14. Internat. Colloqu  
Vol. 1, Ostfildern, DE, Jan 13-15, 20042004

Document type: Conference paper Language: English

Record type: Abstract

ISBN: 3-924813-54-X

2004

ABSTRACT:

...friction materials have been employed by transmission bui  
variety of applications, including torque converter clutc  
synchronizers, limited slip devices and shifting clutches.  
generation of materials gives improved durability relative

5/3,KWIC/4 (Item 4 from file: 95)

<http://www.dialogclassic.com/main.asp?w>

10/22/2006

DIALOG(R)File 95:TEME-Technology & Management  
(c) 2006 FIZ TECHNIK. All rts. reserv.

01841495 20040300975

**Stress analysis of a new disk-type variable torque slipping skewed rollers**

(Analyse der mechanischen Spannung einer neuen, scheibenfoer Rutschkupplung mit veränderlichem Drehmoment und schräg an Rollen)

Feng, M; Ono, K; Mimura, K

Tokyo Inst. of Technol., J; MIM Engng. Comp., Yokohama, J

JSME International Journal, Series C (Mechanical Systems, Materials and Manufacturing), v46, n4, pp1509-1522, 2003

Document type: journal article Language: English

Record type: Abstract

ISSN: 1344-7653

ABSTRACT:

...in order to show the feasibility of this design idea and theoretical torque capacity.

5/3,KWIC/5 (Item 5 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management  
(c) 2006 FIZ TECHNIK. All rts. reserv.

01813111 20031106357

**Mixed EHL analysis of the variable torque slipping clutch w rollers**

(Analyse der Misch-EHD-Schmierung von Schlupfkupplungen mit Drehmoment und mit schrägen Rollen)

Feng, M; Ono, K; Mimura, K

Tokyo Inst. of Technol., J; MIM Engng. Comp., Yokohama, J

Transactions of the ASME, Journal of Tribology, v125, n4, pp

Document type: journal article Language: English

Record type: Abstract

ISSN: 0742-4787

**Mixed EHL analysis of the variable torque slipping clutch rollers**

2003

ABSTRACT:

<http://www.dialogclassic.com/main.vmgw>

10/22/2006

In this paper, a mixed elastohydrodynamic lubrication (EHL) presented for the variable torque slipping clutch with rollers. It is characterized by a finite spatial curve conta dimensional...

...the GT contact pressure-compliance relationship under the condition of the elements of the slipping clutch. The hy ~~per~~ ~~static~~ ~~contact~~ ~~pressure~~ ~~are~~ ~~the~~ ~~calculated~~ and the inter mutual influences...

...of pressures are shown. In addition, the influences of th ~~at~~ ~~the~~ ~~contact~~ ~~torque~~ are investigated both theore experimentally. Concurring agreements are found between the experimental...

5/3,KWIC/6 (Item 6 from file: 95)

DIALOG(R)File 95:TECHNICAL DOCUMENTS, MANAGEMENT

(c) 2006 FTZ TECHNIK. All rts. reserv.

01806556 20031101552

**Controlling** ~~the~~ ~~torque~~ ~~sensor~~ ~~of~~ ~~the~~ ~~Space~~ ~~Center~~ ~~by~~ ~~means~~ ~~of~~ ~~a~~ ~~magnetic-clutch~~ ~~torque~~ ~~sensor~~  
(Magnetische Kupplung mit Drehmomentensensor zur Regelung der Solarzellen im russischen Teil der Internationalen Raumstation Belenkii, AD

All Russian Sci.-Res. Inst. of Electrical Mach., RU  
Russian Electrical Engineering, v73, n5, pp9-14, 2002

document type: journal article Language: English

Indexed topic: Abstract

ISSN: 1068-3712

...drives in the Russian segment of the International Space

2002

#### ABSTRACT:

The International Space Station (ISS) is investigated. A control based on the torque sensor of the limiting magnetic drive is proposed. The sensor must measure the magnetic-clu ~~ture~~ ~~the~~ ~~whole~~ ~~range~~ ~~of~~ ~~axial~~ ~~angles~~ from 0 degree to 36 Optimizing the...

...within the kinematic chain of the gear system, which crea

working conditions for the torque sensor. Operation condition combination with the requirements on the reliability (not less than 15 years), entails the use of the Hall Effect in the sensor. The sensor consists of two identical modules, each with a stator. The...

...the solar cell is minimal. The optimum corresponds to driving the solar cell at the maximum power point. The amplification factor of the feedback must be different when the system is tracking...

5/5, 2006/7 (Item 7 from file: 95)

DIAMOND/TECHNOLOGY & MANAGEMENT

(c) 2006 FIZ TECHNIK. All rights reserved.

01644973 20020509457

Robust control of torque converter clutch slip system  
passenger vehicles using advanced torque estimation algorithm

Hahn Jin-On; Lee Kyo-Il

School of Mech. & Aerospace Engng., Seoul Nat. Univ., ROK

Vehicle System Dynamics, v37, n3, pp175-192, 2002

Document type: journal article Language: English

Record type: Abstract

ISSN: 0042-3114

Nonlinear robust control of torque converter clutch slip system  
2002

# ABSTRACT:

In this paper, a torque-estimation-based robust controller for car torque converter clutch slip system is presented. The robust controller uses only the measurements available from sensors that are installed in current passenger vehicles for estimation and feedback control. A conventional full state observer with a neural network-based

observer is designed to estimate the unknown driving load torque. A torque estimator considering the torque converter is developed for improved torque estimation accuracy. The stability of the internal model-based observer and the performance and

DESCRIPTORS: CLUTCH ; TORQUE CONVERTERS ; ROBUST CONTROL ;

CONTROL ; ARTIFICIAL NEURAL NETWORKS ;

COMPUTERIZED SIMULATION; PASSENGER CARS

5/3, RWIC/8 (Item 8 from file: 95)

DIALOG(R) File: 95-TEMP Technology & Management

(c) 2006, FIZ TECHNIK. All rts. reserv.

01575508 20020107020

Automated welding of extruded profiles and sheets of aluminum  
car bodies

Schulze, V; Loehe, D; Gerber, A

Chinese-German Ultralight Symposium, Beijing, China, 19 - 20

DVS-Berichte, v218, n11, pp89-99, 2001

Document type: journal article; 26 Charts

Record type: Abstract

ISBN: 3-87155-676-9

ISSN: 0418-0639

Automated welding of extruded profiles and sheets of aluminum  
car bodies

2001

#### ABSTRACT:

Die vorliegende Arbeit konzentriert sich auf den Einfluss  
Herstellungssequenz und Parameter der automatisierten Schwei-  
den Ermüdungswiderstand und dem Zerstörungsverhalten von L-  
Schweißverbindungen von...

...Herstellung der Probeexemplare wurde die Strangpressprofil  
Aluminiumlegierung AlMgSi0,5 verwendet. Die Profil-  
Aussenabmessungen h=100 mm und w=50 mm aber mit unterschied-  
Eckradien waren verfügbar. vor...

...die Spaltbreite gegeben. Wie sich der örtliche Einfluss  
der in der Verbindungsgecke erkennt wurde, derzeitig nicht exakt beschrieben werden. Der globale Bruchf  
verbindung Strangpressprofil-Strangpressprofil ist durch de  
Wahlung, in der der Eckenbereich der Schweißung die Post  
maximalen Energiefluss präsentiert, gegeben. Weil dieser  
typisch für die Gestaltung und nicht vermeintbar ist, ko  
örtliche Ausbildung der Ecke durch maximale Penetration der  
und Verhinderung von Kratern im Eckenbereich optimiert w  
Optimierung wird durch die Einstellung der Strangprofilherst  
Schweissequenz des ausgewählten MIG-Schweißprozesses mit

5/3,KWIC/9 (Item 9 from file: 95)

DIALOG(R)File 05-TEME Technology & Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

01535380 20010706382

Development of high durability friction materials

Inagami, K; Kamada, Y; Shibuya, T

Dynax, Hokkaido, J

Tribology of Vehicle Transmissions, the 2001 Internat Symp

Toyota, J, Feb 7-9, 20012001

Document type: Conference paper Language: English

Record type: Abstract

2001

ABSTRACT:

...Slip Differential) of agricultural machines. These new ty materials are adequate for continuous slipping torque co clutches, clutches and brakes for off-highway vehicles wh durability under high pressure applications

5/3,KWIC/9 (Item 10 from file: 95)

DIALOG(R)File 05-TEME Technology & Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

00985950 M96056427562

...Application of H (exp infinity) control design to slip cont torque converter clutch

(Die Anwendung der H (exp unendlich) Regelungsauslegung an c ... die Anwendung eines hydrodynamischen

Osawa, M; Hibino, R; Yamada, M; Kono, K; Kobiki, Y

Toyota Aichi, J

Advances in Automotive Control. IFAC Workshop, Ascona, CH, M 1995

Document type: Conference paper Language: English

Record type: Abstract

ISBN: 0-08-042589-5

Application of H (exp infinity) control design to slip cont  
tor clutch

<http://www.dialogclassic.com/main.vmo>

10/27/2004

1995

## ABSTRACT:

This paper describes the development of a robust feedback on the torque converter clutch slip control system mounted on the automatic transaxle. H (exp infinity) control theory w

5/3,KWIC/11 (Item 11 from file: 95)

DIALOG(R) File 95-TEMP Technology &amp; Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

00856627 M94121001667

Marktluebersicht Anz. 7 11 1

(Market review. Starting couplings)

anonym

Antriebstechnik, v33, oMarktluebersicht 1995, pp168-169, 1994

Document type: journal article Language: German

Record type: Abstract

ISSN: 0722-8546

1994

DESCRIPTORS: STARTING CLUTCHES; CENTRIFUGAL CLUTCHES ; OVER  
CLUTCHES ; TORQUE ; SLIP --

5/3,KWIC/12 (Item 12 from file: 95)

DIALOG(R) File 95-TEMP Technology &amp; Management

(c) 2006 FIZ TECHNIK. All rts. reserv.

00784483 M94064136568

Material for continuous slip torque converter appl  
anti-shudder considerations

(Reibbelag fuer kontinuierlich wirkende Schlupfdrehmomentenw  
andlungselementen)

Lam, RC; Yih-Fong Chen

Daimler-Benz Automotive

SAE Papers, v1, n1, pp1-11, 1994

Document type: Conference paper Language: English

Record type: Abstract

ISSN: 0148-7191

1994



## ABSTRACT:

The basic friction material design considerations for contin  
torque converter clutches are discussed. A bench test met  
developed to predict the performance of continuous slip c  
different temperatures, pressures, and velocities. A test me  
analyze a full-sized friction plate was also designed. Two t  
slip clutches: 'initial shudder' and  
shudder'. These shudder phenomena were investigated. The res  
that...

A 5/3.KWIC/13 (Item 13 from file: 95)

DIALOG(R)File 95-TEME Technology &amp; Management

(C) 2006 FIZ TECHNIK. All rts. reserv.

00747061 M93121020667

Marktbericht. 2. J. 1993. (Technische  
Stellkopplungen)

anonym

Antriebstechnik, v32, nHandbuch 1994, pp162-163, 1993

Document type: journal article Language: German

Record type: Abstract

ISSN: 0722-8546

1993

DESCRIPTORS: STARTING CLUTCHES; CENTRIFUGAL CLUTCHES ; OVER  
CLUTCHES ; TORQUE ; SLIP --

5/3.KWIC/14 (Item 14 from file: 95)

DIALOG(R)File 95-TEME Technology &amp; Management

(C) 2006 FIZ TECHNIK. All rts. reserv.

00547738 M92023672562

Automatic transmission shift quality by feedback  
turbine speed sensor

(verbesserte automatische Getriebschaltung ueber Rueckkoppl  
an Turbinen Drehmoment-Sensoren)

Narita, Y

SAE 1994-01-0454, 1994

Document type: Conference paper Language: English

Record type: Abstract

<http://www.dialogclassic.com/main.html>

10/22/2006

ISSN: 0148-7191

1991

## ABSTRACT:

Shift quality in automatic transmission is greatly affected deterioration and variation of engine torque, hydraulic pressure valves, friction elements and other factors. This paper presents a control

...inertia phase usually becomes shorter as the engaging clutch torque increases. However, an extremely small torque capacity can result in a long inertia phase, resulting in a large torque disturbance. This is avoided by measuring the interval from the initiation of the

...completion of the inertia phase, this making it possible to control the shift between small and large torque capacity conditions. The resulting abrupt throttle closing, can cause shock and

...turbine and output shaft. Power-on downshifts when going to a critical condition for clutch slip. This can be avoided from damage in this system by controlling the timing and capacity

DESCRIPTIONS: VEHICLE GEARS; PROCESS OPTIMIZATION; CONTROL OF AUTOMOBILE ENGINES; ANGULAR SPEED; TACHOMETRIC MEASUREMENTS; MEASURING FEELERS; FRICTION CLUTCHES

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☒ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☐ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☐ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**